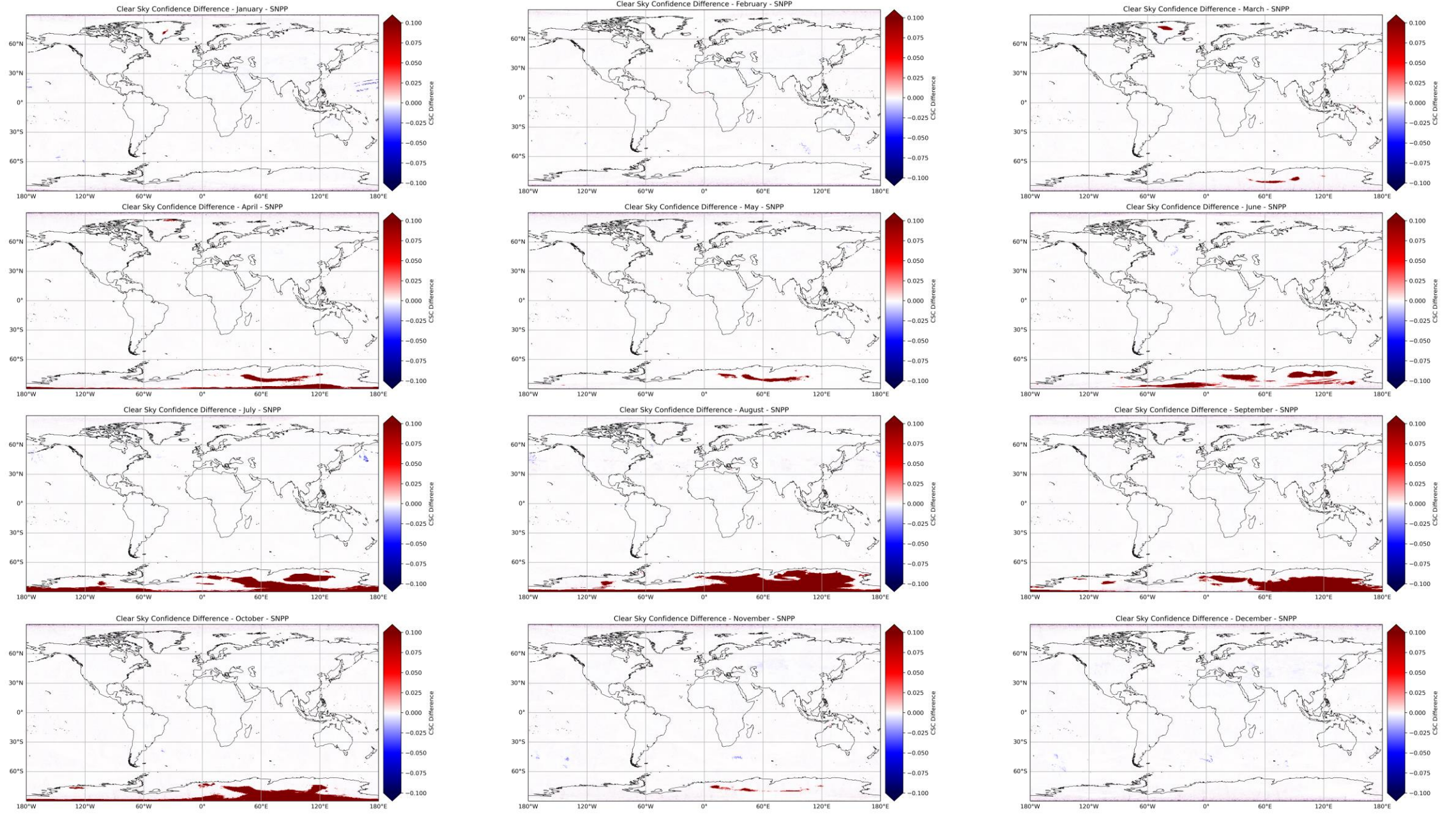


Impact Assessment of L1b and SST input change to MVCM outputs

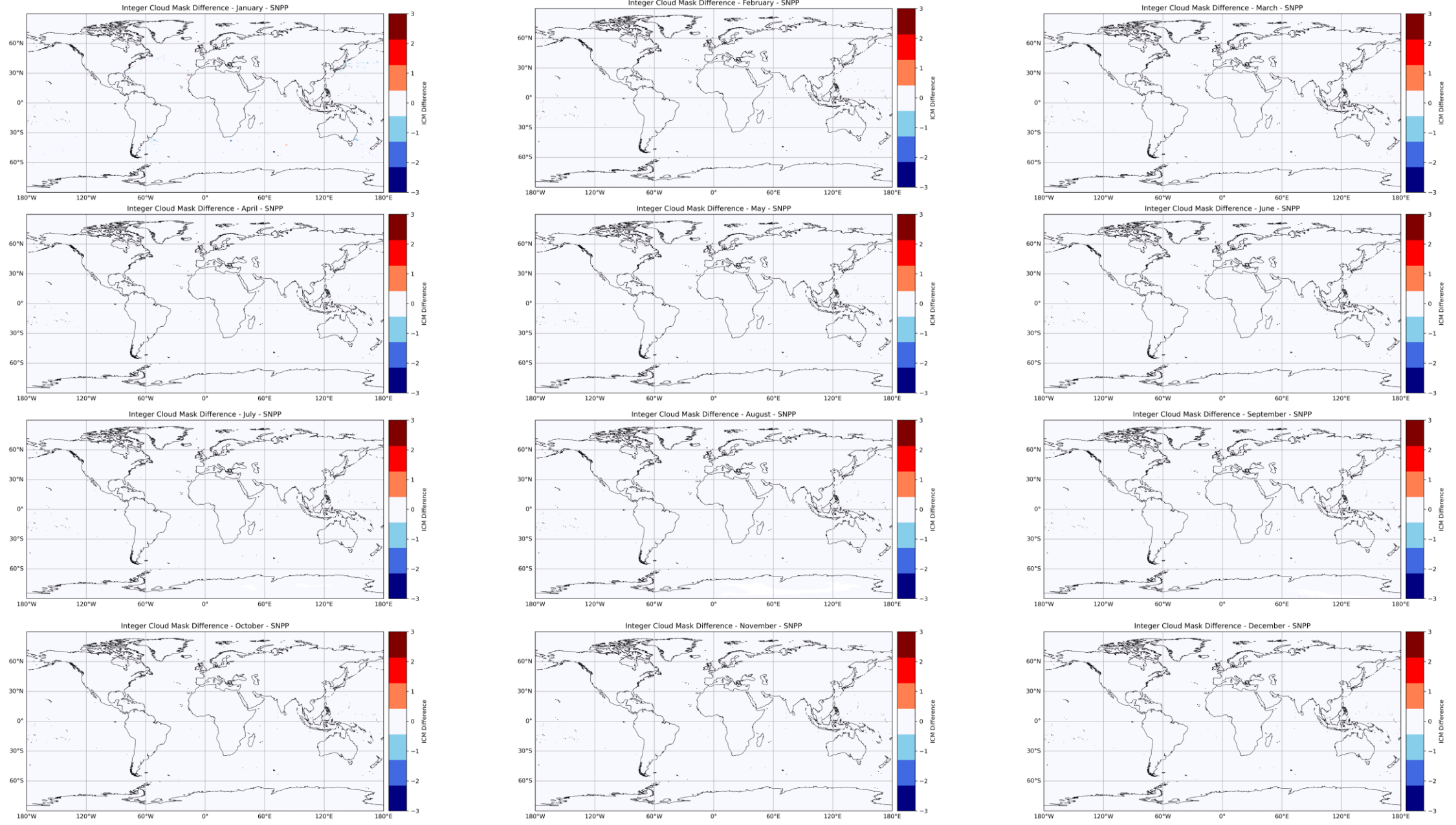
Premise

- In the following we compare the operational Cloud Mask output (v1.0.3 for S-NPP and v1.0.4 for NOAA-2) versus 1.0.5dev0
 - v1.0.3 uses old calibration S-NPP L1b and MVCM 20190117-1, which sets Clear Sky Confidence = 1 when the retrieval is not performed
 - v1.0.4 uses old calibration NOAA-20 L1b and MVCM 20201008-1, which sets Clear Sky Confidence = -1 (i.e. fill value) when the retrieval is not performed
 - V1.0.5dev0 uses new calibration (both S-NPP and NOAA-20) and MVCM 20201008-1
- Some files were missing for January comparison of NOAA-20, this explains the large differences

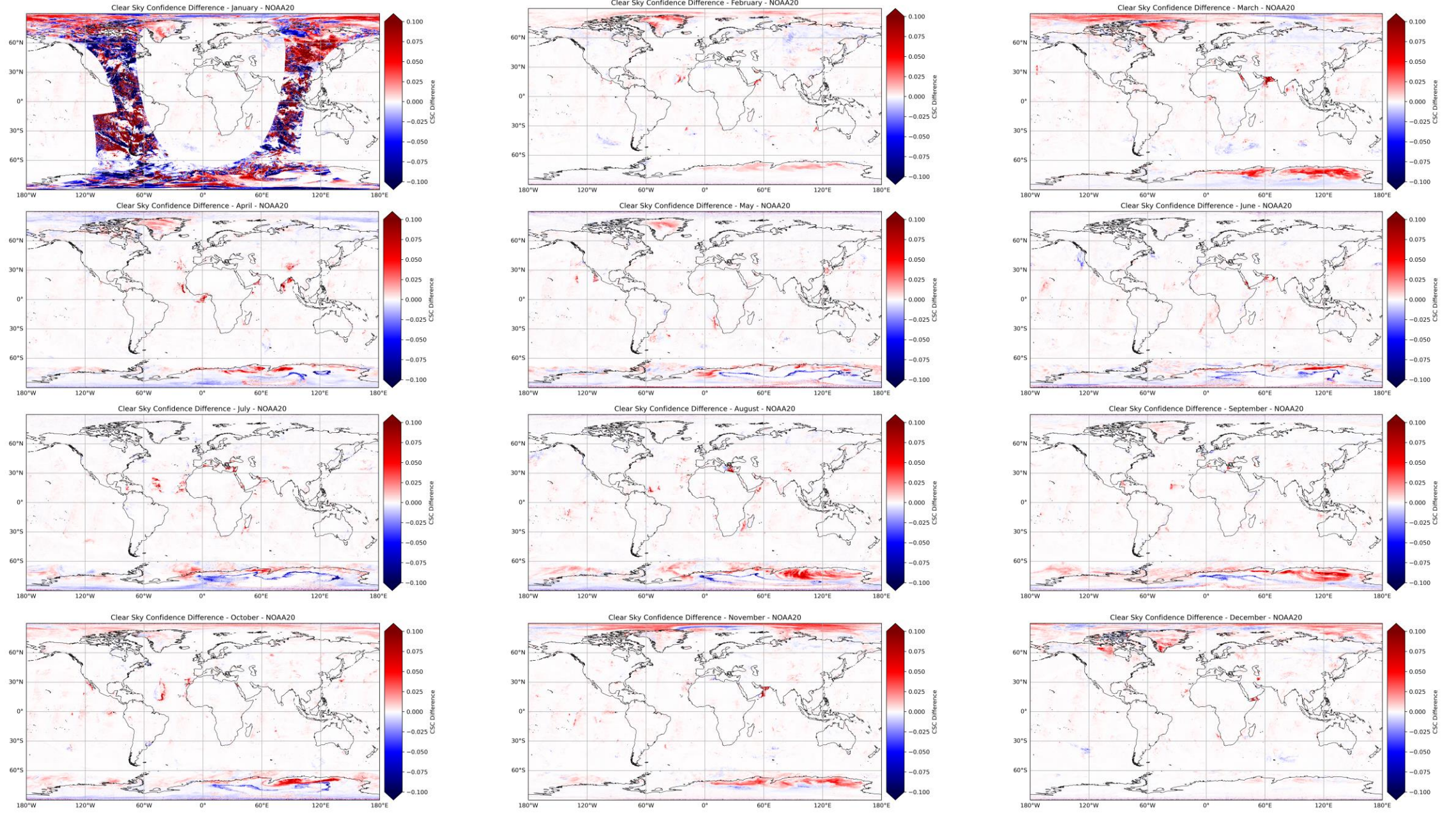
S-NPP Clear Sky Confidence Differences



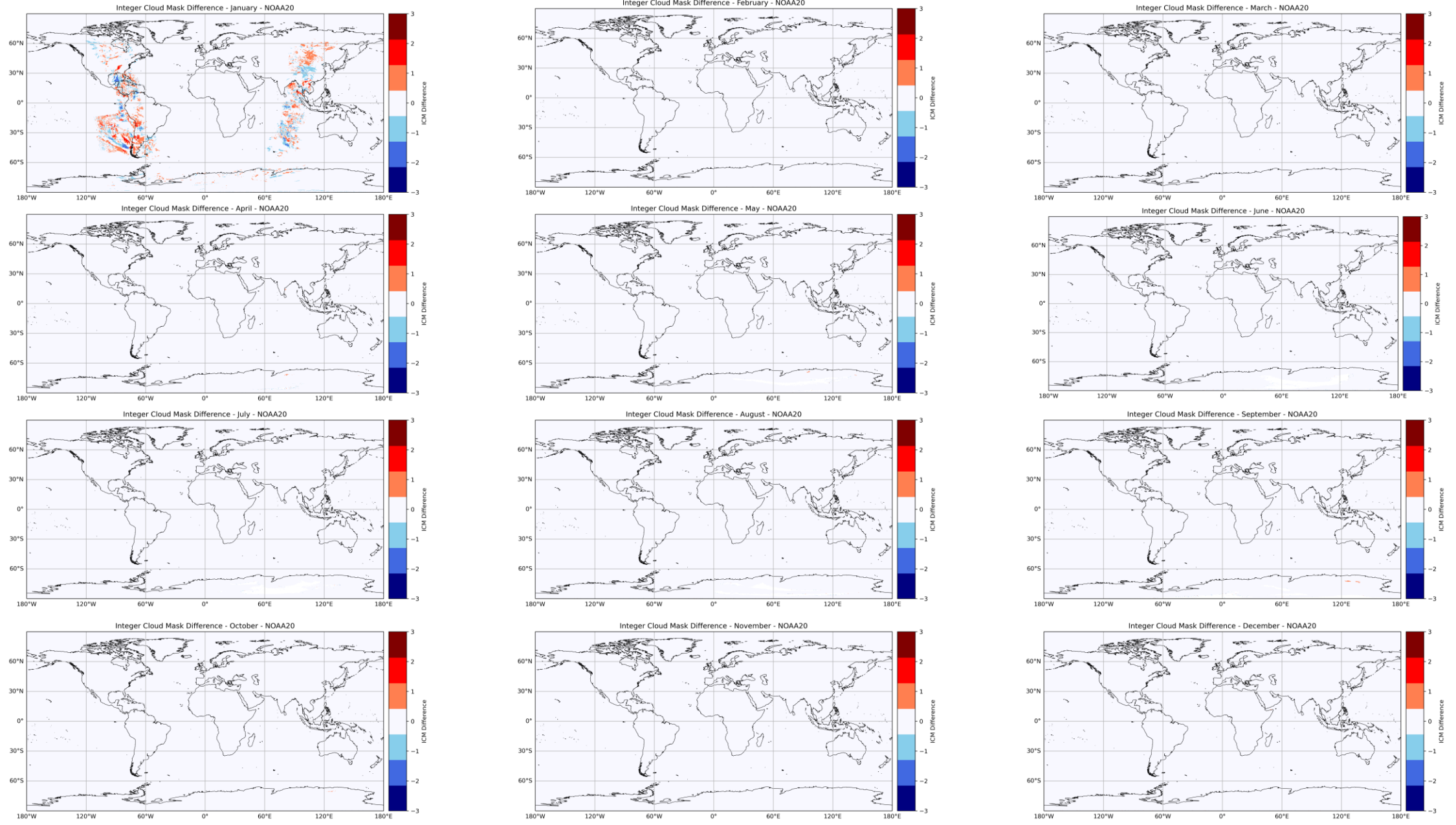
S-NPP Integer Cloud Mask Differences



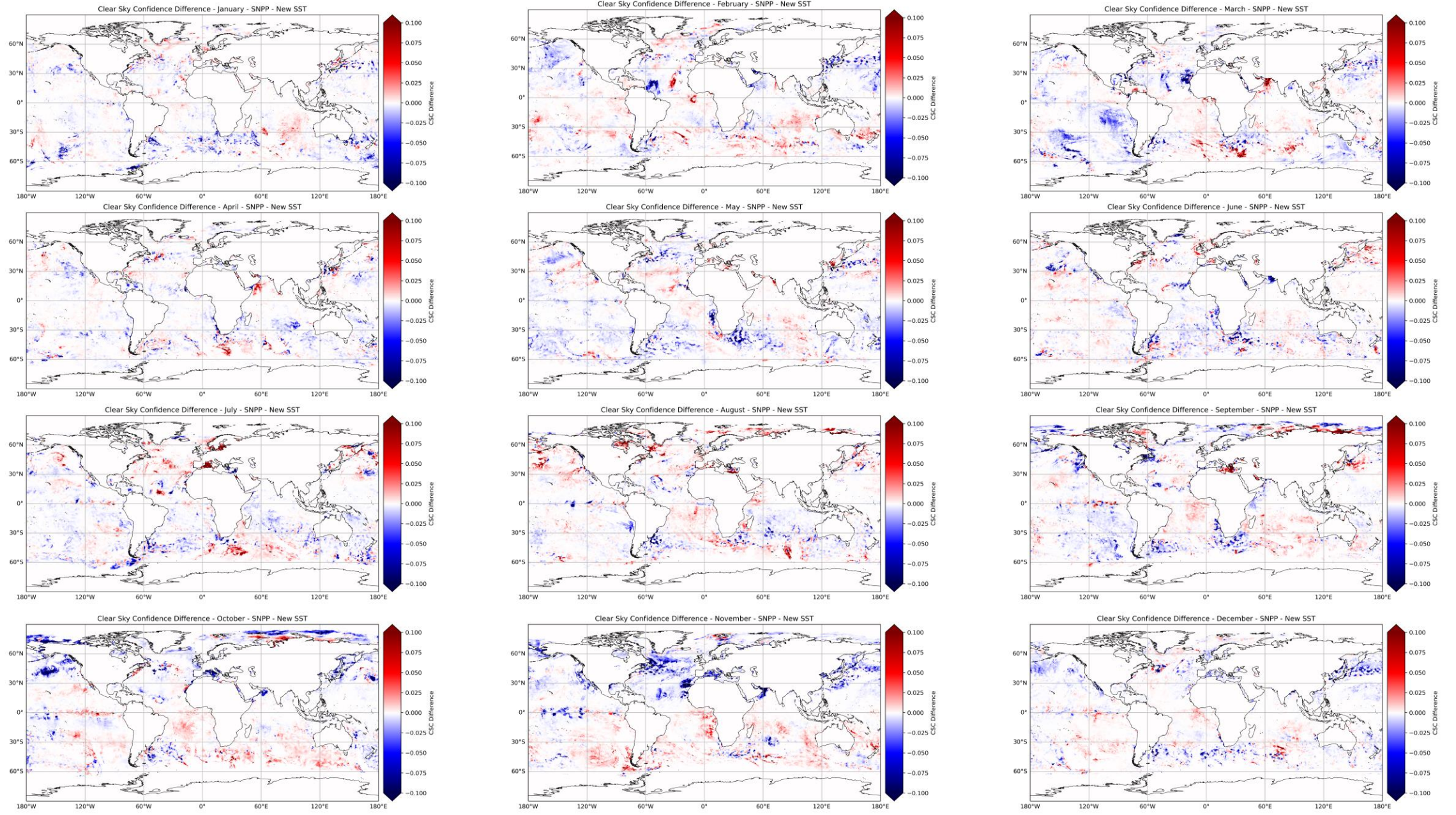
NOAA-20 Clear Sky Confidence Differences



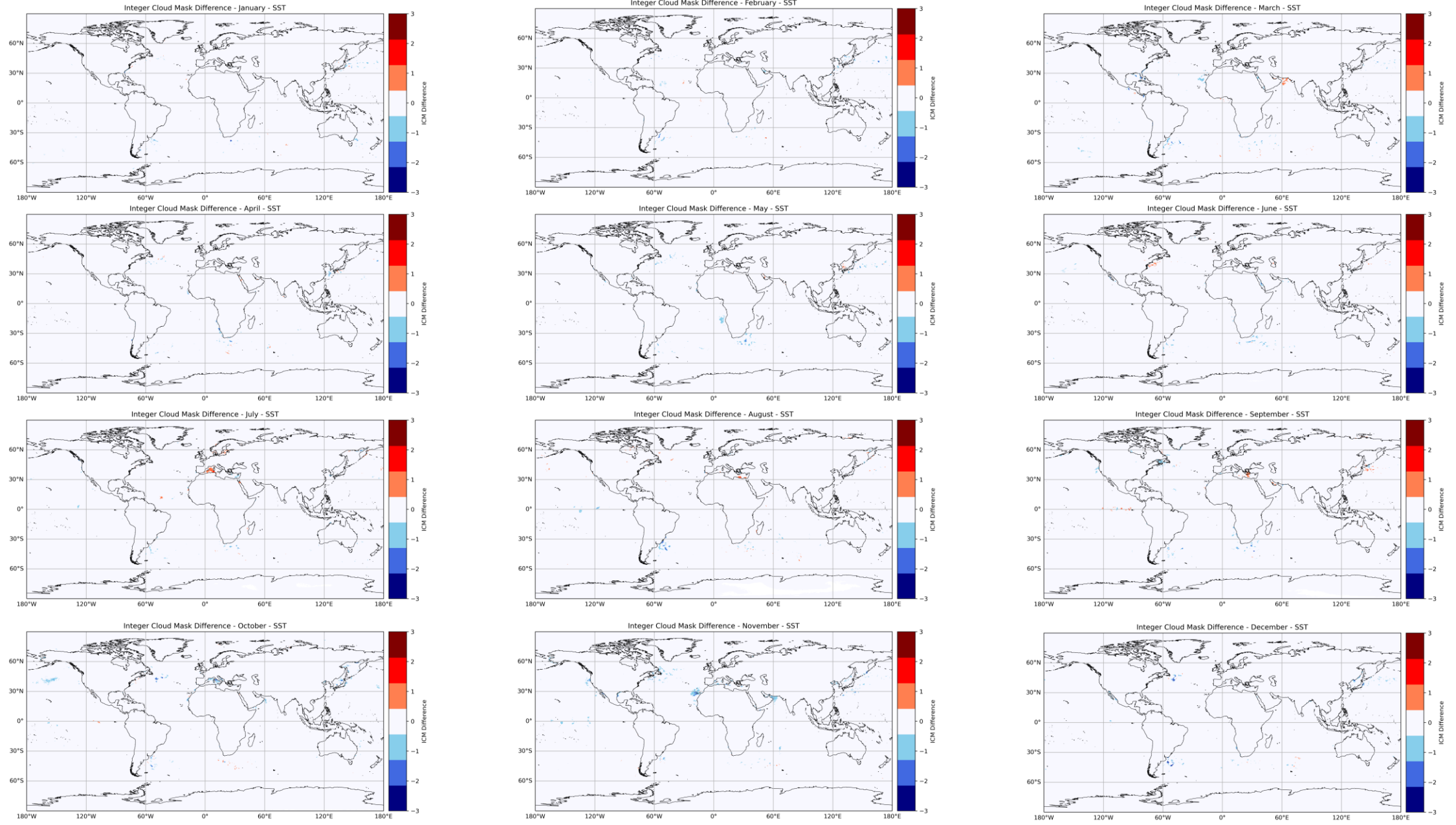
NOAA-20 Integer Cloud Mask Differences



Change SST - Clear Sky Confidence Differences for S-NPP

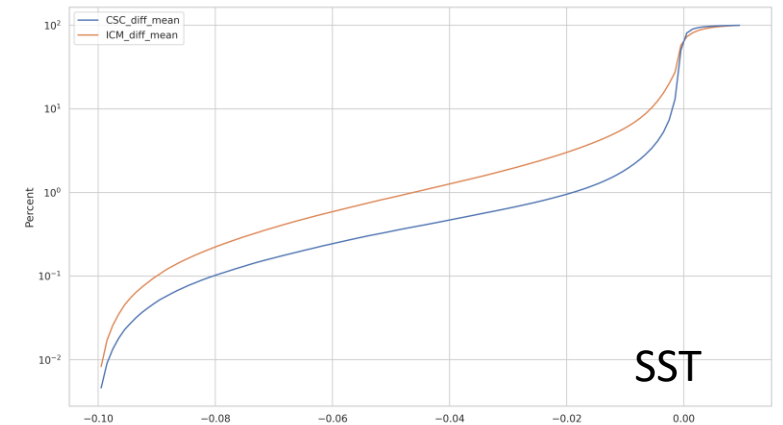
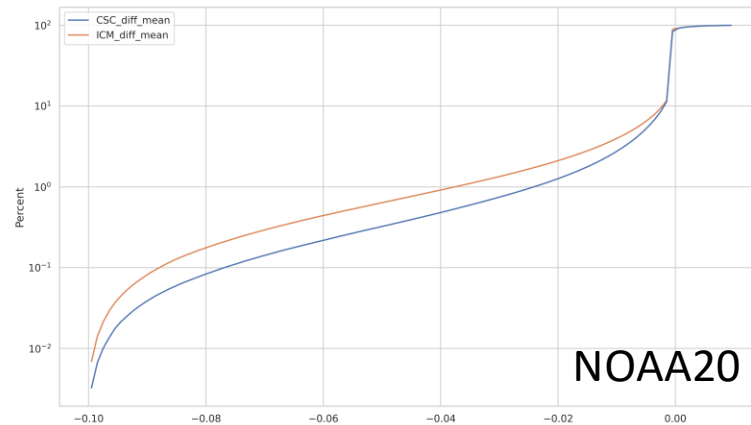
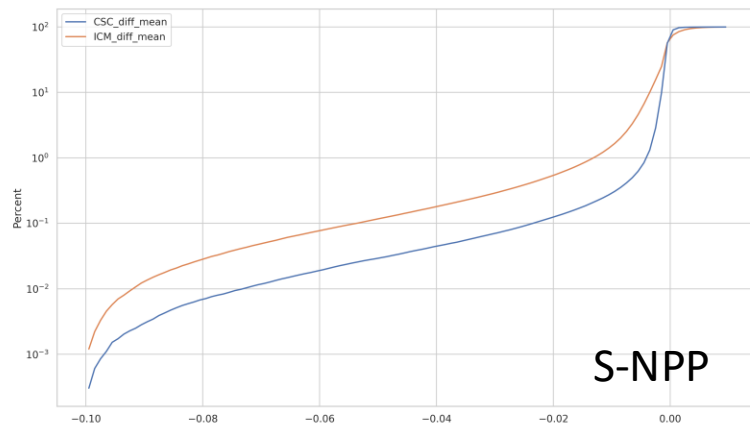


Change SST - Integer Cloud Mask Differences for S-NPP



Cumulative Distribution of CSC and ICM Differences

- Negligible impact of L1b change for both S-NPP and NOAA-20
- Over 99.9% of values are within ± 0.02 for S-NPP and ± 0.08 for NOAA-20
- The new SST input has also only a minimal impact with 99.9% of values between ± 0.07 difference



Conclusions

- Large differences in polar regions for S-NPP comparison are explained by use of different versions of MVCM
- The change in calibration has only a minimal impact in the MVCM output.
- Changing the SST does not affect the MVCM output significantly